

Amendments to the Specification

Please replace the paragraph [0010] at page 2, with the following rewritten paragraph [0010] and new paragraphs [0010.1] and [0010.2] set forth below:

[0010] In order to achieve the above described object, the voice synthesis device according to the present invention includes: a memory unit that stores, in advance for each voice quality, first-voice element information regarding plural a plurality of voice elements having a first voice quality, and second-voice element information regarding the plural voice elements having a second voice quality that is different from the first voice quality qualities that are different from each other; a voice information generating unit that acquires text data, and generates, from the first voice from plural pieces of the voice element information stored in the memory unit, first-synthetic voice information indicating for each of the voice qualities, the synthetic voice information indicating synthetic voice having the first-voice quality which corresponds to a character that is included in the text data, data, and generates second-synthetic voice information indicating synthetic voice having the second voice quality which corresponds to a character that is included in the text data from the second voice element information in the memory unit; a designating unit that places fixed points at Nth dimensional coordinates for display where N is a natural number, the fixed points indicating voice quality of each piece of the voice element information stored in the memory unit, and places plural set points at the coordinates for display on the basis of operation by a user so as to derive and designate a ratio at which changes each of plural pieces of the synthetic voice information which contributes to morphing along a time sequence on the basis of the placement of a moving point and the fixed points, the moving point continuously moving between the plural set points along the time sequence; a morphing unit that generates, from the first and second intermediate synthetic voice information using each of the plural pieces of synthetic voice information generated by the voice information generating unit with the ratio of change along the time sequence designated by the designating unit, the intermediate synthetic voice information indicating synthetic voice having

intermediate voice ~~quality-quality~~, between the ~~first and second voice quality~~ plural voice qualities, which ~~each~~ corresponds to a character that is included in the text data; and a voice outputting unit that converts, to synthetic voice having the intermediate voice quality, the intermediate synthetic voice information generated by the morphing ~~unit-unit~~, and outputs the resulting synthetic voice, wherein the voice information generating unit generates each of the ~~first and second plural pieces of~~ synthetic voice information as a sequence of each of plural characteristic parameters, and the morphing unit generates the intermediate synthetic voice information by calculating an intermediate value of the plural characteristic parameters to which the ~~first and second plural pieces of~~ synthetic voice information respectively correspond.

[0010.1] As a result, synthetic voice having intermediate voice quality between the first and second voice qualities is outputted only when the first voice element information on the first voice quality and the second voice element information on the second voice quality, for example, are stored, in advance, in a memory unit, and therefore, the freedom in the voice quality can be made greater without limiting the voice quality to the content that is stored, in advance, in the memory unit. In addition, intermediate synthetic voice information is generated on the basis of the first and second synthetic voice information having the first and second voice qualities, and therefore, no processing for making the dynamic range of the spectrum excessively large is carried out, unlike in the prior art, and thus, the voice quality of the synthetic voice can be maintained in a good state. In addition, the voice synthesis device according to the present invention acquires text data and outputs synthetic voice in accordance with a character sequence that is included in the text data, and therefore, ease of use can be increased for the user. Furthermore, the voice synthesis device according to the present invention calculates the intermediate value between the characteristic parameters which respectively correspond to the first and second synthetic voice information so as to generate intermediate synthetic voice information, and therefore, does not make any mistake when specifying the portion for reference, and can improve the sound quality of the synthetic voice and reduce the amount of calculation, as compared to a case where a morphing process is carried out on two spectra as in the prior art.

Furthermore, in the voice synthesis device according to the present invention, the ratio of contribution of a plurality of pieces of synthetic voice information to morphing changes in accordance with the fixed points and the set points which are placed on the basis of operation by the user, and therefore, the user can easily input the degree of similarity to the voice quality of voice element information.

[0010.2] In addition, a voice synthesis device according to the present invention includes: a memory unit that stores, in advance, first voice element information regarding plural voice elements having a first voice quality, and second voice element information regarding plural voice elements having a second voice quality that is different from the first voice quality; a voice information generating unit that acquires text data, generates, from the first voice element information in the memory unit, first synthetic voice information indicating synthetic voice having the first voice quality which corresponds to a character that is included in the text data, and generates, from the second voice element information in the memory unit, second synthetic voice information indicating synthetic voice having the second voice quality which corresponds to a character that is included in the text data; a morphing unit that generates, from the first and second synthetic voice information generated by the voice information generating unit, intermediate synthetic voice information indicating synthetic voice having intermediate voice quality between the first and second voice quality which each corresponds to a character that is included in the text data; and a voice outputting unit that converts, to synthetic voice having the intermediate voice quality, the intermediate synthetic voice information generated by the morphing unit, and outputs the resulting synthetic voice, wherein the voice information generating unit generates each of the first and second synthetic voice information as a sequence of plural characteristic parameters, and the morphing unit generates the intermediate synthetic voice information by calculating an intermediate value of characteristic parameters to which the first and second synthetic voice information respectively correspond.